

ABSTRACT

A Wheatstone bridge circuit for a sensor has: first and second sensor elements which respond to a stimulus generated when the sensor is exposed to a sample to be measured, the first and second sensor elements comprising first and second elongated n type nano width regions formed in a suitable substrate; third and fourth sensor elements which respond to the stimulus generated when the sensor is exposed to the sample to be measured, comprising third and fourth elongated p type nano width regions formed in the substrate; and interconnections which interconnect the first and second sensor elements with the third and fourth sensor elements so that the first and second sensor elements are separated from and connected to the third and fourth sensor elements in a manner to form a Wheatstone bridge configuration.